

5.3 Writing Linear Equations Given 2 Points DAY 2

What do you know about parallel lines....something about their slopes???

Parallel lines have SAME slope!

What do you know about perpendicular lines....anything about their slopes....anything???

Perpendicular lines have slopes that are Opposite Reciprocal

Write the equation of a line that is perpendicular to $y = -1/2x + 8$ and goes through the ordered pair (6, 10).

Write the equation of a line that is parallel to $y = 3x - 7$ and goes through the ordered pair (4, 9).

$$m = 3$$

x y

$$9 = 3 \cdot 4 + b$$

$$9 = 12 + b$$

$$\begin{array}{r} -12 \quad -12 \\ \hline \end{array}$$

$$-3 = b$$

$$y = 3x - 3$$

Write the equation of a line that goes through

1. $(12, 2)$ & $(-9, 2)$

2. $(-8, -4)$ & $(4, 2)$

3. $(5, 3)$ & $(4, -3)$

4. $(6, -8)$ & $(6, -4)$

$$m = \frac{-3 - 3}{4 - 5} = \frac{-6}{-1} = 6$$

$$3 = 6(x) + b$$

$$3 = 30 + b$$

$$-27 = b$$

$$y = 6x - 27$$

WORK TIME:
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TICKET OUT THE DOOR
COMPLETE INDEPENDENTLY